INTERNATIONAL SEARCH REPORT

Interna I Application No
PCT/EP2004/000093

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C08F220/00 C09J133/00 C09J7/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C08F C09J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 188 802 A (AVERY DENNISON CORP) 20 March 2002 (2002-03-20) abstract claims; example 5	1-14,32
X	US 5 708 109 A (BENNETT GREGGORY S ET AL) 13 January 1998 (1998-01-13) column 3, line 42 - column 4, line 11 column 5, lines 13-60; claims 1,6-15; examples 1-20	1-14,32
X	EP 0 655 490 A (BEIERSDORF AG) 31 May 1995 (1995-05-31) abstract column 3, line 15 - column 5, line 40; claim 11; example 1	1-24, 29-32

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 October 2004	03. 11. 2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Meier, S

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	EP 1 302 521 A (TESA AG) 16 April 2003 (2003-04-16) abstract page 2, line 48 - page 9, line 40; claims; examples 1,4,7	1-32
E	WO 2004/050784 A (HUSEMANN MARC ; TESA AG (DE); ZOELLNER STEPHAN (DE)) 17 June 2004 (2004-06-17) abstract page 2, line 30 - page 5, line 25 page 7, line 1 - page 14, line 18; claims; examples 1-4,R1,R3,R4	1-32

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

SEE SUPPLEMENTAL BOX

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☒ No protest accompanied the payment of additional search fees.

Continuation of Box III

The International Searching Authority has determined that this international application contains multiple (groups of) inventions, as follows:

1. Claims 1-14 and 32

Contact adhesive tape with a flat backing material coated on both sides with a contact adhesive compound, characterised in that at least one side of the backing material is coated with a polymer-based contact adhesive compound that can be produced from a monomer mixture containing at least the following components:

i.a) 49.5 to 89.5 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester or free acids thereof with the formula $CH_2=CH(R_1)(COOR_2)$, where R_1 is H or CH_3 and R_2 is either an alkyl group with 1 to 10 carbon atoms or H and the homopolymer has a static glass transition temperature of < -30 °C;

i.b) 10 to 40 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester with the formula $CH_2=CH(R_3)(COOR_4)$, where R_3 is H or CH_3 and R_4 is a cyclic alkyl group with at least 8 carbon atoms or a linear alkyl group with at least 12 carbon atoms and the homopolymer has a static glass transition temperature of at least 30 °C;

i.c) 0.5 to 10 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester with the formula $CH_2=CH(R_3)(COOR_5)$, where R_3 is H or CH_3 and R_5 is H or an aliphatic group with a functional group X, where X comprises COOH, OH, -NH, NH_2, SH and SO_3H, and the homopolymer has a static glass transition temperature of at least 30 °C.

2. Claims 15-31

Radical polymerisation process for producing a polymer-based contact adhesive compound, wherein a reaction solution of a monomer mixture composed of at least the following components

i.a) 49.5 to 89.5 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester or free acids thereof with the formula $CH_2=CH(R_1)(COOR_2)$, where R_1 is H or CH_3 and R_2 is either an alkyl group with 1 to 10 carbon atoms or H and the homopolymer has a static glass transition temperature of < -30 °C;

i.b) 10 to 40 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester with the formula $CH_2=CH(R_3)(COOR_4)$, where R_3 is H or CH_3 and R_4 is a cyclic alkyl group with at least 8 carbon atoms or a linear alkyl group with at least 12 carbon atoms and the homopolymer has a static glass transition temperature of at least 30 °C;

i.c) 0.5 to 10 wt.% (relative to the monomer mixture) acrylic acid ester and/or methacrylic acid ester with the formula $CH_2=CH(R_3)(COOR_5)$, where R_3 is H or CH_3 and R_5 is H or an aliphatic group with a functional group X, where X comprises COOH, OH, -NH, NH_2, SH and SO_3H, and the homopolymer has a static glass transition temperature of at least 30 °C,

is produced with the addition of an initiator with a grafting efficiency of $\varepsilon < 5$ and an initiator with a grafting efficiency of $\varepsilon > 5$, and the resulting polymers are crosslinked.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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